

## WHAT IS CLAIMED IS:

1. A wiring structure for a transmission line comprising:

a ground line; and

5 a signal line disposed so as to face said ground line through a dielectric, wherein at least one of a surface of said signal line facing said ground line and a surface of said ground line facing said signal line is provided with a groove extending in a transmission  
10 direction.

2. The wiring structure according to claim 1, wherein said groove is located at a nearly center position of said surface.

3. The wiring structure according to claim 1,  
15 wherein said surface is provided with a plurality of said grooves.

4. A wiring structure for a transmission line comprising:

a wiring substrate;

20 a dielectric provided on a main surface of said wiring substrate;

a ground line disposed in said dielectric; and

a signal line disposed so as to face said ground line, which is disposed in said dielectric, wherein at  
25 least one of a surface of said signal line facing said

ground line and a surface of said ground line facing said signal line is provided with a groove extending in a transmission direction, said surface of said signal line and said surface of said ground line being perpendicular to said main surface of said wiring substrate.

5        5. The wiring structure according to claim 4, comprising a plurality of wiring assemblies each of which includes said ground line, said signal line and said dielectric, wherein the transmission directions of said  
10        signal lines are different from one another at every wiring assembly.

      6. The wiring structure according to claim 5, wherein a flat ground is provided between said wiring assemblies.

15        7. The wiring structure according to claim 4, wherein each of said grooves is located at a nearly center position of said surface corresponding thereto.

      8. The wiring structure according to claim 4, wherein each of said surfaces is provided with a plurality  
20        of said grooves.

      9. The wiring structure according to claim 4, further comprising a power supply line disposed in said dielectric, wherein a surface of said signal line facing said power supply line and a surface of said ground line  
25        facing said power supply line are perpendicular to said

main surface of said wiring substrate, said ground line and said power supply line being disposed so as to face to each other through said signal line in a direction parallel to said main surface of said wiring substrate.

- 5           10. The wiring structure according to claim 4, further comprising a power supply line disposed in said dielectric, wherein a surface of said signal line facing said power supply line and a surface of said ground line facing said power supply line are perpendicular to said
- 10           main surface of said wiring substrate, said ground line and said power supply line being disposed so as to directly face to each other in a direction parallel to said main surface of said wiring substrate.